Cut-off point of body mass index for malnutrition screening in end stage lung disease

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Abstract

Background: Malnutrition is one of the serious complications in end stage lung disease that affects quality of life, mortality rate and lung transplantation outcome.

Objective: The aim of this was to determine the cut-off point of body mass index (BMI) for malnutrition screening in end stage lung disease.

Methods: This cross-sectional study was conducted in 86 patients referred to the lung transplant clinic of Masih Daneshvari Hospital from July 2012 to February 2013. Nutritional status was evaluated using anthropometric measurements including Mid-Arm Muscle Circumference (MAMC), Triceps Skinfold (TSF), BMI, and Fat-Free Mass Index (FFMI). With ROC curve analysis, the cut-off point of BMI for diagnosis of patients with MAMC and SFT<25% and FFMI<5% of normal range was determined. Data were analyzed using Chi-square test and T-test.

Findings: Mean age was 36.7±13.73. Mean BMI was 21.1±5.12 kg/m^2, mean TSF was 11.76±7.79 mm, mean MAMC was 21.41±3.93 cm^2, and mean FFMI was 16.69±2.35 kg/m^2. Twenty eight patients (32.6%) had FFMI<5% and MAMC and SFT<25% of normal range. In ROC curve analysis, the cut-off point of BMI for malnutrition was 19.4 kg/m^2 with sensitivity of 0.844, specificity of 0.842, Youden Index of 0.686 and Shortest distance from the point (0, 1) of 0.0493.

Conclusion: With regards to the results, it seems that the cut-off point of BMI for malnutrition screening is 19.4 kg/m^2 in patients with end stage lung disease.

Keywords: Lung Transplantation, Malnutrition, Body Mass Index

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